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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,784	09/17/2003	Yasunobu Shirata	242914US2	2972

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1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

GE, YUZHEN

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/663,784	SHIRATA ET AL.	
	Examiner	Art Unit	
	Yuzhen Ge	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 6-7, 10 and 12 rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe (US Patent 5,589,954).

Regarding claims 1, 7 and 12, Watanabe teaches an image processing apparatus and the corresponding method, comprising:

an acquiring unit that acquires an image data corresponding to an image (Fig. 20, col. 37, lines 53-57, 111 in Figs. 44 and 45);

a determining unit that determines image types in an image data corresponding to an image (Fig. 20, 112 in Figs. 44 and 45, col. 36, lines 48-59, col. 37, lines 57-66);

an image area separation unit that separates the image into areas corresponding to each of the image types and generates area data corresponding to each of the areas (Fig. 20, 112 in Figs. 44 and 45, col. 36, lines 48-59, col. 37, lines 57-66);

a memory which stores the image data and the area data in a correlated manner (Fig. 20, Figs. 43-46, implicit that the image data and area data is stored in a correlated manner);

an image processing unit that subjects a specific image data stored in the memory to one or more of gamma correction, color conversion, and gradation processing based on processing conditions set for the area data correlated with the specific image data (Figs. 20, 44 and 45, col. 36, lines 48-59, col. 37, lines 57-66, col. 38, lines 35-48);

a conversion unit that converts a format of the image data processed by the image processing unit into a general-purpose format (col. 12, lines 31-33, Fig. 20, the image data is converted from RGB to CMKY which is a general-purpose format for printers); and

a transmission unit that sends the image data in the general-purpose format to an external device (39-40 in Fig. 20, Figs. 44-45).

Regarding claim 2, Watanabe teaches the image processing apparatus according to claim 1, wherein the image types include one or more of character, photograph, color, and presence of halftone (col. 36, lines 47-55, col. 37, lines 57-64).

Regarding claim 3, Watanabe teaches the image processing apparatus according to claim 2, wherein the image type is any one or more of the character and the photograph, and the processing condition is gamma-correction (col. 36, lines 47-59, Figs. 44 and 45, col. 37, lines 57-66, col. 38, lines 35-48).

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Regarding claim 6, Watanabe teaches the image processing apparatus according to claim 1, further comprising an image formation unit that forms an image on a recording medium based on the image data stored in the memory (col. 1, lines 30-32, Figs. 6 and 22, col. 23, lines 31-34, the image formation unit is a printer).

Regarding claim 10, Watanabe teaches the image processing apparatus according to claim 7, wherein the image type is a character, and the processing condition is gamma correction (col. 36, lines 47-59, Figs. 44 and 45, col. 37, lines 57-66, col. 38, lines 35-48).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Aoyagi et al (US Patent 5,982,999).

Regarding claims 4-5 and 8, Watanabe teaches the image processing apparatus according to claim 2, wherein the image type is any one or more of the character and the photograph (Fig. 20, 112 in Figs. 44 and 45, col. 36, lines 48-59, col. 37, lines 57-66). He also teaches color correction and gradation correction/shading correction (Figs. 40 and 41). However he does not explicitly teach wherein the processing condition is color correction or gradation processing

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based on the image type and a filtering unit that subjects the image data corresponding to the image types to filter processing. In the same field of endeavor, Aoyagi et al teach color correction and gradation processing based on the image type and a filtering unit that subjects the image data corresponding to the image types to filter processing (Fig. 3, 3006-310, col. 7, line 53-col. 8, line 12). It is perform efficient and high quality reproduction of images by adapting correction and adjustment according to the image type. Therefore it would have been obvious to one of ordinary skill in the art, at the time of invention, to use the method of Aoyagi et al to perform color correction, gradation correction and filtering based on the image type so that processing is more efficient and the resulted image quality is better.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Tabata et al (US Patent 6,993,181).

Regarding claim 9, Watanabe teaches the image processing apparatus according to claim 7, wherein the image data acquired by the acquiring unit includes Red, Green, and Blue color components, the image area separation unit separates an image area corresponding to characters from the image data (Figs. 20, 44 and 45, col. 36, lines 48-59, col. 37, lines 57-66). However he does not explicitly teach the character is black and the image processing unit adjusts the Red, Green, and Blue color components forming the image data in the separated image area of the black characters so that the components have the same value. In the same field of endeavor, Tabata et al teach identifying an image area corresponding to black characters and the image processing unit adjusts the Red, Green, and Blue color components forming the image data in the

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separated image area of the black characters so that the components have the same value (Figs. 8, 14, 16, col.4, lines 19-30). It is desirable to eliminate image degradation such as coloring (col. 4, lines 27-30 of Tabata et al). Therefore it would have been obvious to one of ordinary skill in the art, at the time of invention, to correct the black characters so that image degradation during coloring can be eliminated.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Bhattacharjya et al (US Patent 6,546,132).

Regarding claim 11, Watanabe teaches the image processing apparatus according to claim 7, wherein the image data acquired by the acquiring unit includes Red, Green, and Blue color components, the image area separation unit separates the image area corresponding to a character area/white background from the image data (Figs. 20, 44 and 45, col. 36, lines 48-59, col. 37, lines 57-66, implicit that a character area has white background). However they do not explicitly teach that the image-processing unit adjusts the Red, Green, and Blue color components forming the image data on the separated white background image area so that the components have the same value. In the same field of endeavor, Bhattacharjya et al teach an image processing unit adjusts the Red, Green, and Blue color components forming the image data on the separated white background image area so that the components have the same value (col. 5, lines 32-46). It is desirable to improve background production and reduce bleed-through artifacts (abstract of Bhattacharjya et al). Therefore it would have been obvious to one of ordinary skill in the art, at the time of invention, to use the method of Bhattacharjya et al to adjust the color of white

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background so that the bleed-through artifacts can be reduced and background production can be improved.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuzhen Ge whose telephone number is 571-272 7636. The examiner can normally be reached on 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Yuzhen Ge
Examiner
Art Unit 2624



WENPENG CHEN
PRIMARY EXAMINER

11/18/07